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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/807,042	03/22/2004	Lawrence J. Malone	022263-000410US	4076

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EXAMINER

JACKSON, BLANE J

ART UNIT	PAPER NUMBER
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2685

DATE MAILED: 12/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/807,042	Applicant(s) MALONE ET AL.	
	Examiner Blane J. Jackson	Art Unit 2685	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5,7-17 and 20-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,5,7-17 and 20-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Upon reconsideration of the second after Final Amendment filed 16 November 2005 and Interview conducted 11 November 2005, the Final Rejection filed 17 June 2005 is withdrawn. New grounds for rejection are applied in the following Non Final rejection for claims 1, 3, 5, 7-17 and 20-26.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Reddy et al. (US 2004/0127214) with a view to Stockhusen (US 2002/0132636).

As to claims 1 and 17, Reddy teaches a transceiver system and method for utilizing a plurality of different communication standards (figures 2 and 3), comprising:

A transceiver selectably configurable to a plurality of different communication standards (wireless multi-mode transmit/receive units or mobile units, with selective infrastructure communication mode, peer-to-peer communication mode and relay mode, paragraphs 0023-0027, 0029 and 0060),

A memory configured to store information received by the transceiver utilizing a first communication standard and configured to provide the information to the transceiver for transmission according to a second communication standard (relay or hybrid mode; mobile unit converts the substantive communication data between the protocols and formats of the two communication modes, an ad hoc network utilizing a WLAN modem to an infrastructure network system comprising time division duplex or frequency division duplex, paragraphs 0024 and 0054.

Reddy teaches the transceiver controller is configured to control the transceiver components to switch or relay between infrastructure and peer to peer communication modes, paragraph 0023, but does not clearly teach a *single* transceiver for managing the multiple modes.

Stockhusen teaches control of a multi-mode multi-band mobile telephone utilizing a single hardware and software man machine interface and a single transceiver, figure 1B, paragraphs 0018-0021. Stockhusen discloses the telephone selects between two or more interface standards including GSM, CDMA, DECT, NAMPS and time division multiplex (TDMA).

It would have been obvious to one skilled in the art at the time of the invention to recognize the relay conversion processing circuitry of Reddy is implemented as taught by Stockhusen for controlling a multi-mode mobile telephone via a single transceiver and man machine interface to reduce the complexity of the mobile system.

As to claim 7, Reddy of Reddy modified teaches the single transceiver utilizes the plurality of different communication standards by time multiplexing there between (a hybrid mode that converts communication data between protocols and formats of the two communication modes where the conversion would necessarily be a form of time division to interface with the time division formats of the ad hoc network running an 802.11 technology and time division duplex or other multiplex standard of the telephone network, paragraphs 0054 and 0060).

As to claim 8, Stockhusen of Reddy modified teaches a single transceiver necessarily coupled to an antenna sub-system capable of communication utilizing the plurality of different communication standards (transceiver of figure 1A or 1B to process two or more air interface standards, paragraph 0021).

As to claims 9-11 with respect to claim 1, Stockhusen of Reddy modified teaches a single transceiver is coupled to a single or plurality of baseband sub-systems each capable of processing one of the communication standards (figure 1A, different air interface standards on different chipsets (processors) (112) and (114) and figure 1B, single chipset (116), paragraph 0017).

As to claims 12 and 13 with respect to claim 9, Reddy teaches at least one of a time and a duration of access to the single transceiver by the baseband sub-system is tracked for access during assigned time intervals (performs a time multiplexed

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conversion of the data between two different communication multiplex standards, paragraph 0054).

As to claim 14 with respect to claim 9, Stockhusen of Reddy modified teaches the baseband subsystems share memory (paragraph 0029).

As to claim 15 with respect to claim 9, Reddy teaches the baseband subsystems optimize a frequency or duration of transmissions or receptions in order to at least one of minimize a radio utilization, minimize a spectrum utilization, maximize a link throughput and optimize a system parameter (a quality of service criteria, paragraph 0024 and 0044).

As to claim 16 with respect to claim 9, Reddy teaches the baseband subsystems at least on of translate, code, and decode information bits so as to make the information bits compatible with the plurality of different communication standards (appropriately converts the substantive communication data between the protocols, paragraph 0054).

As to claims 20 and 25, Reddy modified teaches the claim elements as discussed above in claims 1 and 7.

As to claims 21 and 24 with respect to claim 20, Reddy teaches the baseband processor is further configured to configure the single transceiver for operation

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according to the first communication standard prior to the first time period and configure the single transceiver for operation according to the second communication standard prior to the second time period (performs a time based conversion of the data between two different communication multiplex standards, paragraph 0054).

As to claim 22 with respect to claim 20, Stockhusen of Reddy modified teaches the baseband processor comprises a multiple standard baseband processor (figure 1B, single core embodiment, paragraph 0020).

As to claim 23 with respect to claim 20, Stockhusen of Reddy modified teaches a first and second baseband processor configured to operate in accordance with the first and second communication standards (figure 1A, dual core (chipsets) embodiment, paragraph 0018 and 0019).

As to claim 24 with respect to claim 20, Reddy teaches the baseband processor is further configured to process a signal received by the single transceiver during a third time period according to the first communication standard and store received information in the memory and wherein the baseband processor processes the received information from the first and third time periods according to the second communication standard for transmission by the single transceiver during the second time period

(performs a time multiplexed conversion of the data between two different communication multiplex standards, paragraph 0054).

As to claim 26 with respect to claim 20, Reddy teaches the baseband processor is further configured to process a signal received by the single transceiver during a third time period according to the second communication standard and store received information in the memory and further configured to process the received information according to the first communication standard for transmission by the single transceiver during a fourth time period (performs a time multiplexed conversion of the data between two different communication multiplex standards, paragraph 0054).

Conclusion

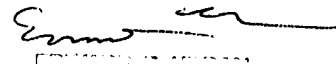
3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Perlman (US 2005/0176452) discloses a plurality of access points to relay WLAN data. Shah et al. (US 6,957,069) discloses a multi-mode wireless telephone capable to relay WLAN and telephone network data.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blane J. Jackson whose telephone number is (571) 272-7890. The examiner can normally be reached on Monday through Friday, 8:00 AM-5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

BJJ



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